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Italy: Limited Room For Monetary Maneuvers

Italian policymakers have discovered the difficulty of attempting to combine large and growing public-sector deficits with a relatively restrictive monetary policy. Over the past three years the government's general borrowing requirement has climbed from some 9.4% of GDP in 1979 to over 12% in 1982. Including government lending activity along with the current and capital deficits of state-owned companies, the borrowing requirement of the enlarged public sector—known as the PSBR—approached 15% of GDP last year, compared with 13.8% in 1981.

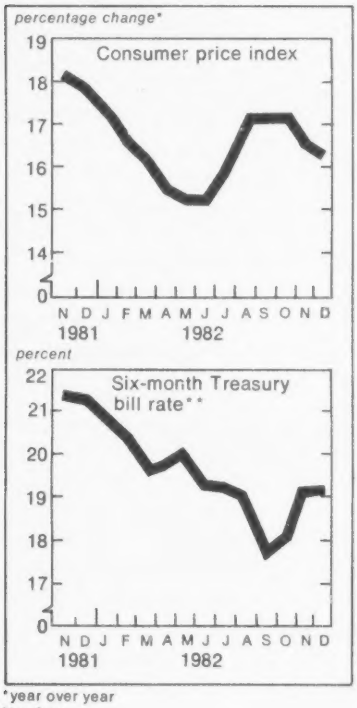
At the same time, the Bank of Italy has sought to follow a moderately restrictive monetary policy, both to hold inflation in check and to support the lira on the foreign-exchange markets. Despite the central bank's efforts, however, domestic credit expansion and Italy's various measures of the monetary aggregates accelerated significantly in the second half of last year. For 1982 as a whole, domestic credit grew by an estimated 21%, much faster than either the originally targeted figure of some 15% or the actual inflation rate of about 16%. Growth of the broadly defined money stock was more moderate—mainly as a result of Italy's current-account deficit.

The overshooting stemmed almost entirely from a fundamental economic reality: that the public sector's financial needs—which amounted to around 70% of total domestic credit last year—must ultimately be met. There are limits to the degree of credit restraint that can be applied to the private sector if it is to continue to function; as it was, private-sector credit growth last year was held to an estimated 13%. In the end, the monetary authorities will undoubtedly be forced to allow a faster rate of credit expansion to avoid further crowding out of private investment.

For the financial markets, this carries the risk of destabilization. Rekindled inflation expectations will be reflected in the bond and foreign-exchange markets. Uncertainties over future financial policy may then increase the risk premium on short-term government borrowing.

The Italian authorities appear to be aware of these problems. The Bank of Italy has moved to offset a part of the increase in total credit growth by raising banks' reserve requirements. More important, the Fanfani government has proposed a series of measures, mainly higher taxes, that would hold the 1983 PSBR at 15% of GDP. If policies remain unchanged, the figure is projected to rise to 17%. But, it still remains to be seen whether a sufficient political consensus will develop for a significant *reduction* in the PSBR/GDP ratio—a necessary condition if the Italian monetary authorities are to regain room for policy maneuvering.

Italian inflation and interest rates



*year over year
**tax free

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Recent improvements in French labor market expected to be short-lived.

The French unemployment problem appears ready to take a turn for the worse. The small reduction in the seasonally adjusted number of unemployed seen in the final months of 1982—to just over 2 million in December—is likely to be reversed over the course of 1983. For one thing, technical and probably temporary influences were at work in the latter part of last year. For another, the economy is unlikely to grow quickly enough to extend the recent downtrend in unemployment. The official government forecast predicts real GDP growth of only 2%. And even that figure is looking increasingly optimistic in view of both the economic recovery expected in the rest of Europe and the need to reduce France's current-account deficit from the 85-billion-franc level reached in 1982. A more likely picture is for a real growth rate closer to 1% and a renewed upturn in unemployment by the second quarter of this year.

Austrian government budget feeling effects of recession.

The continuing recession in Europe is putting pressure on Austria's public finances. Industrial production declined in the third quarter of 1982 and by October had fallen 2.7% below its year-earlier level. As a result, the unemployment rate had risen to 4.5% by November—up from 3.2% in November 1981 and well above the level of 3.3% assumed for the 1983 budget. Accordingly, the government's projection of a gross budget deficit for this year of 74 billion schillings—virtually unchanged from the 1982 deficit—appears to be too low. In view of this, Chancellor Kreisky has announced his intention to raise taxes in the latter part of 1983 if his party wins the election scheduled for April 24. The extra revenue—estimated at around 15 billion schillings in a full year—would be used in part, to create jobs and, in part, to reduce the budget deficit. Nevertheless, a lasting upturn in the Austrian economy must await a recovery in Germany, which is currently not expected until the second half of 1983.

Morocco's record current-account deficit expected to improve this year.

According to preliminary estimates, Morocco's current-account deficit widened marginally last year to a record $1.9 billion from $1.84 billion in 1981. The deficit reflected an increase in the merchandise trade gap to $1.7 billion from $1.55 billion in the previous year, despite slower import growth. Softer world prices and more modest increases in the quantities of grain, sugar, and oil purchased held the 1982 rise in merchandise imports to 15% in local currency terms, compared with 34% in 1981. Nevertheless, the expansion of exports also slowed markedly—down to 7% last year compared with 24% in 1981—largely because of the weaker demand for phosphate rock. Had it not been for the continued growth in workers' remittances and tourist income, which partially offset the higher interest payments on external debt, the 1982 current-account gap would have been larger. The outlook for 1983 is more optimistic, however. The severe drought that had plagued Moroccan agriculture since 1980 finally ended last year, improving the chances of a good harvest this year. This and the prospects for lower oil prices, falling world interest rates, and stronger export growth suggest the current-account deficit will narrow significantly.

Restrictive measures aimed at restoring balance to Costa Rican economy.

Within the context of an IMF standby arrangement, Costa Rica is undertaking a corrective austerity program centered on a restrictive fiscal stance. The overall public-sector deficit as a proportion of national income is expected to be lowered still further this year—down to 4.5% of GDP from an estimated 9.2% in 1982 and around 15% in 1981. To achieve this, a tax package was recently passed calling for an increase in the sales tax and an expansion in the number of goods taxed, a higher social security quota, an income tax surcharge, the elimination of food subsidies, and corrective price adjustments for publicly produced goods. In addition, expenditures—particularly capital outlays—are to be substantially curtailed. A lowered fiscal deficit, in turn, means that the government's borrowing requirements from the domestic banking system will be contained. This, the authorities hope, will help to curb total liquidity expansion to about 30% this year from 50% in 1982. While tight demand-management policies are crucial to lowering the country's current-account deficit, redressing the international payments position will also hinge on the successful rescheduling of the external debt presently under negotiation.

Modest improvement in Finnish economy expected in 1983.

The breakup of Finland's ruling coalition in December, after arguments over the country's 1983 defense budget, diverted attention away from economic problems for a while. But with a new government now in power, the economy has moved once again to center stage. Last year brought a growth slowdown as world markets for Finnish products became progressively more depressed. Falling oil revenues prompted the Soviet Union to cut back its purchases of Finnish exports, but there are hopes for some pickup this year. To help get the economy moving, the government has lowered employer taxes. And last October's 10.3% devaluation should give some boost to exports. Official forecasts from the Ministry of Finance point to economic growth of 2% in 1983, coupled with a 9% inflation rate. The overall balance of payments is expected to swing into a small surplus of some $300 million, after a deficit in 1982 provisionally estimated at about $500 million.

Slow growth for Colombia, but debt problems likely to be avoided.

With the end of 1982, the Colombian economy marked its second consecutive year of below-par performance. Real GDP for the year is estimated to have been 1.5%, down from the 2.5% of the previous year and well below the 6% average growth of the 1970s. Restrictive monetary and fiscal policies, plus a decline of exports have been the primary causes of the slower growth. The overall balance of payments has shifted into deficit, principally as a result of a drop-off in invisibles and tourism earnings. International reserves (less gold) fell by $1 billion between the end of 1981 and October 1982. Yet Colombia is doing well compared to other Latin American countries suffering from recession and external debt problems. The country has a modest amount of external debt relative to its economic size and, as a result of its traditionally cautious approach to external borrowings, has avoided the financial liquidity problems that have plagued other countries. Little change is expected for the economy in 1983: Moderate real growth of 2%-3% is possible, and external debt will probably be utilized for selected projects with good returns.

Indonesia—hard hit in 1982—adopts program of restraint.

Indonesia's economy suffered a severe buffeting in 1982. Thanks to a waning oil market, gross income from oil exports fell by 19%. Weak world markets brought a 10% decline in Indonesia's non-oil exports, as well. Imports, however, continued to rise, as the government—with World Bank encouragement—pushed ahead on its development program. The result was a current-account deficit of $6.57 billion. Faced with a continued large payments deficit and declining revenues, the government has announced an austere budget for fiscal 1983/84. Total expenditures will be held to an increase of only 6.1% from the current year's budget. Civil service salaries will be frozen for a second year. Subsidies on food will be eliminated and those on oil products and fertilizer reduced. In addition, the government has placed administrative restraints on imports of a wide variety of goods and indicated that plans for some major capital projects will be reviewed. Devaluation as a remedy has been formally rejected, but the rupiah has been allowed to depreciate gradually against the dollar. This slippage will probably continue over the rest of the year.

Foreign banks to be allowed to set up operations in Australia.

The Australian government has announced that it intends to admit a small number of foreign banks to full-service operation within Australia. This move is consistent with some of the recommendations of the Campbell Report, a government-mandated study of the Australian financial system completed in September 1981. The Campbell Report suggested that the long-standing embargo on non-resident participation in Australian banking be removed but that the rate of entry of foreign banks be closely managed. The report further recommended that resident equity participation not be required of the new foreign banks. The government, however, chose to focus on the "level and quality" of Australian ownership in considering the foreign applications for banking licenses. Some Australian banks have expressed reservations about allowing the entry of foreign banks. But the government apparently feels that the increased competition will benefit Australian savers and investors.

The Benefits of Recession

Recession, almost by definition, is a time of pain. But it can also be a time of economic adjustment that can have beneficial effects for the long run. Because the current recession has been longer and, in many ways, more severe than most, it may well provide a long-needed purging of a number of ills that have plagued the economy for some time—provided that policymakers can resist pressures for a short-run, quick-fix cure.

In large measure, the economy has been forced to bear the costs of the 1979 shift in Federal Reserve policy from targeting interest rates to targeting monetary aggregates, with the avowed purpose of slowing inflation. Consumer prices have indeed slowed, from a 13.3% rate of increase during 1979 to just 3.9% in 1982. The shift in Fed policy, however, has also brought higher interest rates—especially adjusted for inflation—and more volatility.

Consumers responded by cutting back on installment buying; new credit extensions as a share of income fell from a peak of just over 20% in mid-1979 to about 15% last fall. And corporations improved their balance sheets dramatically. New business debt increased at a rate of 19% during 1976-79 but has been roughly flat since then, and this has helped to stem the erosion of short-term assets relative to liabilities. Both of these changes mean that a larger share of any future gains in income can be used to finance new spending rather than to pay off old debts.

Businesses were able to improve their balance sheets, despite falling sales, largely because of the severe cost-reducing measures they have undertaken. Current inventories are below 1979 levels in volume terms. And manufacturing payrolls are nearly 15% lower than their 1979 peak, which has helped to increase industrial productivity. Furthermore, wage gains have slowed, so that labor costs per unit of output rose only 6% in 1982 compared with more than 11% in 1979.

The protracted nature of the slump in activity has also forced businesses to reexamine their capacity needs. Many old and inefficient plants were being carried on company books in anticipation that they might someday be needed to fulfill peak demands. Now, however, such obsolete investments are being written off, improving the prospects for gains in earnings when demand does pick up. Already, corporate profits have shown some improvement—in the third quarter of last year and probably in the fourth as well—despite falling output.

The adjustments to lower inflation have by no means been painless. But they were necessary to avoid the continued ratcheting upward of inflation. If the Fed and the administration can now avoid overly rapid stimulation of the economy, a sustained non-inflationary recovery may well be their reward.

Douglas L. Bendt

Europe, Canada & U.S. Bimonthly Survey of Business and Finance

COUNTRIES	CURRENT BUSINESS CONDITIONS	INDUSTRIAL OUTPUT		GNP IN 1981		BALANCE OF PAYMENTS						MONEY AND BANKING							COUNTRIES
												12-month changes							
		latest data	12-month change	in billions of dollars	real growth	latest data	reserves (less gold) in $ million	12-month change	months of imports covered	use of IMF credit, millions of dollars	current influences on payments	latest data	consumer prices	latest data	money supply(M1)	central bank rate△	exchange rate in U.S. dollars January 26, 1983	current monetary conditions	
Austria	Government discusses tax hikes despite general election scheduled for April.	July	+ 2%	65.8	0	Nov.	4,769	+ 4%	3.0	0	Estimated 1982 current-account deficit was $3.8 bn., down from 1981's $5 bn.	Nov.	+ 5%	Oct.	+ 8%	5.75%	.0592	M3 growth in November was 16.6%, year on year.	Austria
Belgium	Economy continues to await upturn in rest of Europe; incomes policy in place for 1983.	Sept.	0	97.1	−2.0%	Nov.	4,199	−21%	1.0	0	Export profit margins improving in wake of devaluation and wage restraint.	Jan.	+ 8%	June	+ 1%	11.50%	.0212	Interest rate differential with Germany widens.	Belgium
Britain	Although consumer demand has risen steadily, output still shows no sign of responding.	Nov.	− 1%	523.8*	−1.8%*	Nov.	13,042	−16%	1.6	56	Nov. current-account surplus was £700 million, but rapid erosion still forecast.	Dec.	+ 5%	Oct.	+19%	11.00%	1.5480	Sterling weakness has forced rise in interest rates.	Britain
Denmark	Tough anti-inflation policy will keep activity low this year.	Sept.	+ 2%	55.9	−0.2%	Nov.	2,102	−22%	1.6	0	Jan.-Nov. 1982 trade deficit was Kr. 10.4 bn, vs. Kr. 8.7 bn. in same 1981 period.	Nov.	+10%	Sept.	+11%	10.00%	.1185	Interest rates still high despite Nov. discount rate cut.	Denmark
Finland	Growth expected to pick up this year after virtual stagnation in 1982.	Sept.	− 4%	48.3	+1.3%	Nov.	1,306	− 6%	1.2	16	Jan.-Nov. 1982 trade deficit was 399 mn. markka, vs. 194 mn. in 1981 period.	Nov.	+ 8%	Aug.	+18%	8.50%	.1873	Govt. forced to borrow 1 bn. markka from central bank.	Finland
France	Industrial production recovered somewhat in 1982 4th qtr.; 1% GDP growth expected in '83, at best.	Nov.	− 2%	657.8*	+0.3%	Oct.	13,043	−40%	1.4	0	Trade deficit in 1982 widened to FF 92.7 billion, vs. FF 60 billion in 1981.	Dec.	+ 9%	Aug.	+15%	9.50%	.1465	Franc in EMS remains fragile despite rate easing.	France
Germany	Real GNP fell an estimated 1.2% in 1982; upcoming election scheduled for March 6.	Nov.	− 7%	685.5	−0.2%	Nov.	43,440	− 3%	3.5	0	Export volume declining, but terms of trade are improving.	Dec.	+ 5%	Oct.	+ 6%	5.00%	.4155	Liquidity being eased despite pre-election weakness of DM.	Germany
Greece	Budget for 1983 seeks to reduce deficit relative to GNP despite 30% rise in public expenditure.	Aug.	−16%	38.0	−0.7%	Nov.	1,074	− 4%	1.4	0	Drachma devalued 15.5%, import quotas proposed to reduce trade deficit.	Oct.	+20%	July	+35%	20.50%	.0119	Credit continues to expand rapidly.	Greece
Ireland	Tough budget expected that will allow Ireland almost no growth this year.	Aug.	− 3%	16.2	+1.1%	Nov.	2,309	−15%	2.9	0	Trade deficit virtually eliminated toward the end of 1982, hopes raised for 1983.	Aug.	+17%	Oct.	+11%	14.00%	1.5480	Budget deficit and pound pressure keep rates high.	Ireland
Italy	Output continues to decline; wage indexation loosened.	Nov.	− 8%	350.6	−0.2%	Nov.	13,248	−29%	1.9	0	Trade deficit in Oct.-Nov. widens again compared with year-earlier levels.	Dec.	+16%	Aug.	+14%	18.00%	.000717	Prime rate reduced.	Italy
Netherlands	Economy continues to stagnate; inflation rate of 4.3% in 1982 was below German rate.	Nov.	− 6%	139.0	−1.1%	Nov.	9,195	− 1%	2.0	0	Current account continues in large surplus, upward pressure on guilder.	Dec.	+ 4%	Sept.	+ 8%	4.50%	.3776	Key interest rates reduced by half a point.	Netherlands
Norway	Some 1% growth in GDP is expected this year after 1982's 1.4% fall.	Oct.	− 4%	55.6	+0.8%	Nov.	7,304	+13%	5.9	0	Trade surplus for 1982 was Kr 14 billion, vs. Kr 15 billion in 1981.	Nov.	+11%	Aug.	+ 9%	9.00%	.1405	Stockmarket sharply revived after 1982 decline.	Norway
Portugal	The calling of early elections adds uncertainty to 1983 economic outlook.	May	− 1%	23.5*	+5.5%*	Oct.	503	−18%	0.6	11	Current-account deficit for 1982 est. at $3 bn.; year-end external debt $12 bn.	Sept.	+21%	June	+11%	19.00%	.0105	Credit controls continue to keep situation tight.	Portugal
Spain	Budget for 1983 yet to be formulated.	May	+ 1%	183.7	+0.3%	Oct.	7,610	−33%	2.9	19	Current-account deficit for 1982 est. at $3.8 bn., down from 1981's $5 bn.	Oct.	+14%	Sept.	+16%	8.00%	.00781	M3 growth in Nov. was 16.6%, year on year.	Spain
Sweden	Sweden's 1983/84 budget aims for export-led growth.	Sept.	− 1%	111.5	−0.7%	Nov.	4,289	+20%	1.9	0	Jan.-Nov. 1982 trade deficit was Kr 4.8 bn., vs. Kr 1.3 bn. in 1981 period.	Dec.	+10%	Oct.	+10%	10.00%	.1356	Central bank discount rate cut.	Sweden
Switzerland	Domestic activity remains low and 1983's GDP is expected to fall lower than 1982's.	June	− 3%	99.4	+2.0%	Nov.	13,530	+30%	5.9	0	Trade deficit in 1982 was SF 5.4 billion, vs. SF 7.3 billion in 1981.	Dec.	+ 6%	Sept.	+31%	4.50%	.5074	Interest rates down owing to franc strength.	Switzerland
Canada	End of recession awaits U.S. recovery; real GDP down 9% since June 1981.	Nov.	−12%	276.4	+3.1%	Nov.	2,898	−22%	0.6	0	First whole-year current-account surplus in a decade estimated for 1982.	Dec.	+ 9%	Oct.	+ 5%	9.81%	.8104	Interest rates ease; bank rate in single digits.	Canada
United States	Production looks set to rise in early 1983 to restock inventories after rapid liquidation.	Dec.	− 6%	2,937.7	+1.9%	Nov.	22,858	+15%	1.0	0	Trade balance to show marked deterioration in first half of 1983.	Dec.	+ 4%	Dec.	+ 8%	8.50%	—	Large govt. deficit creating upward pressure on rates.	United States

*1980

△most recently reported

Is Money Growth Still Important?

The sharp increase in M1 for the week ending January 12 was quickly interpreted by market participants as another disappointment for the Federal Reserve. The subsequent surge in interest rates, however, does not necessarily mean that the markets thought that money growth had finally gone far enough to make the Fed tighten. What it does appear to indicate is that the markets still feel money has a powerful effect on interest rates and on eventual Fed behavior, even if Fed reaction is not as quick or as severe as it used to be.

Although it has not been officially announced, the monetary authorities have clearly moved to interest-rate targeting. Thus, the importance to the markets of week-to-week movements in money growth has diminished, since the Fed is less likely to react to such data by quickly injecting or draining reserves. It remains to be seen how much the Fed's interest in money growth has waned, but it is worth noting that since the start of the current targeting year—the midpoint of the fourth quarter of 1982—the authorities have tolerated M1 growth at an annual rate of over 15%. As a result, market worries have to be mounting over when the Fed will once more become more concerned about the long-run effects of rapid money growth.

The rationale for such concern stems from the observed historical relationship of money to nominal (current-dollar) income. Nominal income contains both price and output components, but economists have noted that over the long run, money is much more closely related to prices than to real output. This observation has led economists to the belief that money growth eventually must be contained if inflation is to be controlled. A failure to bring money back under control could lead to a reacceleration of inflation that would ultimately invoke a repeat performance of the 1979-82 anti-inflationary trauma, but starting at even higher levels of inflation and interest rates. It is the market participants' understanding of this that has caused them to ask how much longer the Fed can tolerate such massive growth in M1.

In this situation, the question of whether money growth is still important has two answers. Over the longer run, it clearly is. The larger-than-expected mid-January spurt in M1 caused Treasury-bill rates to rise sharply, even though the Fed has declared its intention to avoiding tightening in reaction to above-target money growth. Clearly, the markets are concerned that—whatever the Fed's immediate reaction—high money growth will eventually lead to high inflation and interest rates. They further believe that the Fed understands this and will act accordingly. In the near term, however, money growth is not that important either for understanding or for predicting the behavior of the monetary authorities. The magnitude of the Fed's reaction to money growth is much lower today than it was six months or a year ago, and clearly well below what the markets had become accustomed to since October 1979.

D. Sykes Wilford

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World Interest Rates

market rates of Jan. 26, 1983; bond yields as of Jan. 21, 1983

in percent per annum	U.S.	Canada	Britain	Belgium	France	Germany	Italy	Netherlands	Switzerland	Japan
Central Bank Discount Rate	8.50	9.81	11.00 intervention rate	11.50	9.50	5.00	18.00 penalty rate 21.00	4.50	4.50	5.50
Day-to-Day Money	8.25 January 27	11.00	11.50	7.45	12.50	6.00	19.00	3.75	0.75 1-month Euro-Swiss fr. rate	6.8125
Treasury Bills 91-day, Middle Rates	8.12	9.50	11.0625	12.25	n. a.	n. a.	17.604 63 days	no dealing	no market	5.625 two-month
Commercial Paper prime, 3-month, asked	8.50 finance paper discount basis	9.90 finance paper 15% tax w/h	n. a.	11.40 Certified	12.75 Interbank	no market	no market	no market	no market	not traded
Bankers' Acceptances 3-month, asked	8.35	9.80 15% tax w/h	11.125	11.40 Certified	not traded	6.50	19.40	no market	3.00	no market
Government Bonds Long-term, new and old issues, average yield	10.83	12.50	11.37	10.77	14.38	8.00	19.35	7.88	4.22	6.862*
Industrial Bonds prime, long-term, new and old issues, average yield	11.85 Aa Industrials	13.25	12.66	12.85	15.18	8.10	19.53	8.13	5.73	6.39*
Bank Short-Term Rate (prime rate)	11.00	12.00	12.00	15.50	14.55	9.00	20.75 ⅛ qtrly fee on outstdng.	7.00	6.50	6.00
Bank Time Deposits 3-month	8.50 Cert. of Dep.	9.80	11.50	12.05	12.75	5.75	11.50	5.00 large deposits	2.00 residents only	3.75
Eurocurrencies 3-month, asked	9.1875	10.625	11.625	no market	19.25	n. a.	no market	5.00	2.75	6.563
Exchange Rates—in U.S.$ rates floating against the $	—	.8104	1.5480	.0212	.1465	.4155	.0007	.3776	.5074	.0042
Forward Exchange Cover** 3-month, in percent p.a. *D* = discount, *P* = premium	—	1.187 *D*	2.080 *D*	4.303 *D*	9.386 *D*	3.706 *P*	11.204 *D*	4.187 *P*	6.391 *P*	2.464 *P*

Eurodollar Deposits
(London, interbank, bid)
January 27

7-day	8.8125
1-month	9.0625
3-month	9.3125
6-month	9.5000

International Arbitrage
(3-month, hedged) + *in favor of U.S. dollars*

U.S.-U.K. Treasury Bills	−.621
U.S.-Canada Treasury Bills	+.300
U.S.-Canada Finance Co. Paper	+.069
Eurodollars-U.K. Local Auth. Deposits	+.108

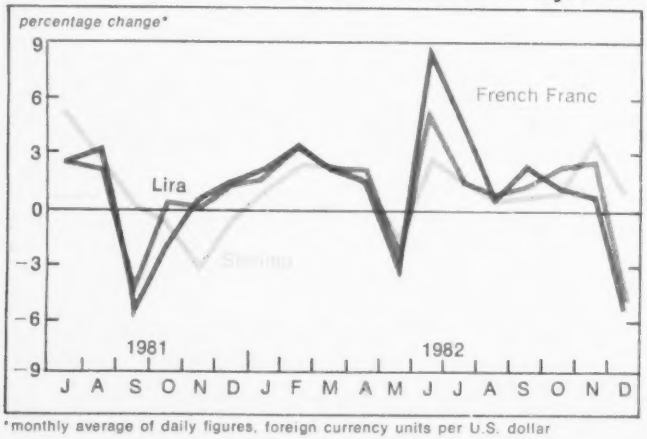
Eurobonds
(average yield on recent straight debt issues)

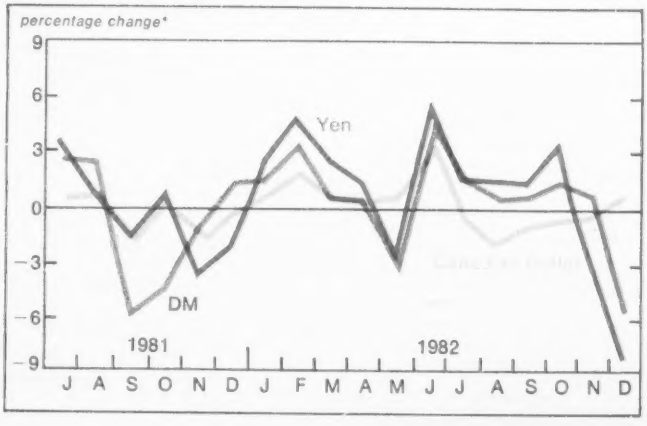
U.S. Dollar Bonds	
7 yrs. and under	10.625
Over 7 yrs.	11.00
DM Bonds	
7 yrs. and under	7.50
Over 7 yrs.	7.75

Gold Price
London afternoon fixing
486.50
(per fine ounce)

The above interest rate quotations refer to the past week and may not be construed as offers by The Chase Manhattan Bank. The quotations for Bank Short-Term Rate (prime rate), while including customary commissions, reflect neither possible other fees nor varying compensating balance requirements.
*Bond yields as of January 14. **Forward exchange cover as of January 27.

Movements of major currencies against the dollar





*monthly average of daily figures, foreign currency units per U.S. dollar

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Currency Substitution and the Canadian Dollar

The November announcement by Canadian central bank officials that they would no longer focus on the monetary aggregates as principal policy variables provided further evidence of the close links between the Canadian and U.S. economies. Since last October it has been apparent that the Federal Reserve has abandoned aggregates targeting, although as yet there has been no official word that the policy shift is a permanent one. With its action, the Canadian government acknowledged once again how difficult—if not impossible—it is for Canada to maintain a monetary policy independent of the United States. Efforts to do so in the past for anything more than a short period of time have been answered by the foreign-exchange markets with sharp swings in the value of the Canadian dollar.

One force behind this convergence of policies is the high degree of substitutability between the U.S. and Canadian currencies—that is, the extent to which corporations, banks, and individuals hold both Canadian dollars and U.S. dollars in their money portfolios in order to conduct their daily business. A close relationship between the currencies has evolved over the years, owing to a number of special conditions: The capital and product markets of the two countries are well integrated; both currencies are used in Canada and along the northern tier of the United States; and finally, the monetary and political authorities of both countries function in much the same way.

Chase research has found that taking account of this substitutability can lend a good deal of predictability to Canadian exchange-rate movements. Any change in the relative proportions of the two currencies that businesses and individuals hold in their money portfolios must affect the Canadian dollar/U.S. dollar exchange rate. Somewhat surprisingly, however, many of the traditional approaches to exchange-rate analysis either overlook currency substitution entirely or include non-substitutability as a basic assumption.

Traditional models

For example, under the classic theory of purchasing power parity (PPP), movements in the rate of exchange between the currencies of any two countries are driven by relative movements in their respective price levels—but, it is assumed that the citizens of each country hold only their own currency. Divergent price levels, in turn, are caused by differences in relative monetary growth or in the expansion of real output, among other things. In general, according to PPP, the country experiencing greater money growth can be expected to suffer a depreciation of its currency. The currency of the country with relatively stronger real-output growth, on the other hand, is more likely to appreciate, because the higher level of economic activity can support increased money growth without inflationary pressures.

Traditionally, PPP has been accepted as a guide to long-run exchange-rate trends, but it has been criticized for its limited usefulness in short-run forecasting. PPP models typically have no way of accounting for the uncertainties spurred by government exchange-market intervention or for the variable effects on the spot exchange market of delays in the commodity-arbitrage process.

Another type of foreign-exchange analysis—the balance-of-trade approach—explains exchange-rate movements through the balancing of receipts and payments in international trade. A direct relationship is assumed between the trade balance and the exchange rate. Balance-of-trade deficits call for a depreciation of the domestic currency to inhibit imports and make domestically produced goods more competitive in world markets. These methods take into account such "nominal" (unadjusted for inflation) forces as relative price levels and interest rates, but ignore the impact of capital flows on balancing accounts. They share with PPP the exclusion of currency substitution as a determinant of exchange-rate movement.

A third approach to exchange-rate determination, the monetary approach, has gained a great deal of support in recent years because it has the postiive attribute of considering both nominal and real (inflation-adjusted) variables. In general, this method begins with an assumption of purchasing-power parity. The balance between domestic money supply and demand determines prices. Real income and nominal interest rates, in turn, determine money demand. Thus, under this approach, exchange-rate movements are driven by relative changes in money supply, interest rates, and real income.

Under floating exchange rates, the standard monetary model assumes zero currency substitution. Demand-side substitutability is generally dismissed with an assumption that individuals desire money portfolios consisting entirely of domestic currency. Any foreign currency or foreign asset denominated in a foreign currency is therefore immediately exchanged for its domestic counterpart. Such an assumption, of course, is unrealistic in view of the high degree of integration between the U.S. and Canadian financial markets—which may explain why this approach has not done very well in explaining movements in the C$/US$ exchange rate.

Going to the opposite extreme would incorporate the monetary approach using an assumption of perfect

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Currency Substitution and the Canadian Dollar *(continued from page 7)*

demand-side substitutability—that is, a case in which businesses and individuals are totally indifferent as to whether they hold Canadian dollars or U.S. dollars, because either is equally capable of providing the money services they require.

Because there would exist foreign demanders of domestic currency, a decision by the monetary authorities of one country to increase domestic money supply would have international effects. Some of the increase would find its way into the portfolios of foreign holders of domestic currency, increasing the foreign money stock and price levels accordingly. In the absence of government intervention in the foreign-exchange markets, inflation would be transmitted between countries. Furthermore, the ability of the monetary authorities to pursue autonomous domestic policies would be totally undermined.

Applying this framework to the United States and Canada would be tantamount to identifying the total money stock of the two economies as the relevant money variable in explaining prices and thus foreign-exchange movements. There would be one inflation rate common to both countries. Of course, the level of real output may differ. To support different rates of output growth would require a divergence in measured velocities of money circulation.

Canada and the United States would thus be considered part of a common capital pool, which both countries must use to support their real economic activity. During periods in which economic activity in Canada exceeds that in the United States, money would tend to flow into Canada from the United States. The rate of growth of Canadian dollars or the proportion of Canadian dollars to the total combined money stock would then be rendered ineffectual with respect to the rate of inflation or real economic activity in Canada.

Although this version of the monetary approach seems to make more sense than the first one examined, which assumed no substitution between U.S. and Canadian dollars, empirical testing of a model incorporating the logic and assumptions of *perfect* currency substitution is academic, since it is obvious that the spot exchange rates for U.S. and Canadian dollars can and do diverge.

A third variation of the monetary approach—using imperfect substitutability between the two currencies—not only has intuitive appeal, but also yielded extremely good results when tested. The scope for currency substitution depends on the extent to which Canadian and U.S. monetary policy diverge. Long-run expectations are for U.S. and Canadian prices to move roughly in the same pattern and for the exchange rate, in general, not to move enough to lead to portfolio realignment unless there is a major shift in policy. Short-run price and exchange-rate movements may vary from the long-run trend, however.

Third parties

This method can also incorporate the effects of third-party holders of one of the currencies. For example, portfolios of businesses or individuals from a third country—say Germany—contain several currencies, the majority of which will be neither Canadian dollars nor U.S. dollars. External shocks affecting the German mark/U.S. dollar rate would cause a change in the quantities of U.S. dollars Germans would desire to hold in their currency portfolios. Even in the absence of any change in the degree of monetary-policy divergence between the United States and Canada or other political disturbances, the C$/US$ rate might still be affected.

Consider an example in which an external shock affects the DM/US$ rate, causing holders of marks to sell U.S. dollars. Unless the holders of Canadian dollars desire to hold this extra supply of U.S. dollars, the Canadian dollar would change in value. Traditional approaches would predict a decline in the C$/US$ rate resulting from the increased supply of U.S. dollars. But allowing for the substitutability between currencies, the result may be that holders of portfolios sell equal amounts of Canadian dollars and U.S. dollars. An excess supply of Canadian dollars relative to U.S. dollars is thereby created. Consequently, exchange-rate movement may occur merely because of the relative size of the two stocks of money. The more substitutable the currencies, the greater the likelihood of this result.

Obviously, the main conclusion from this exercise is that forecasters who do not consider currency substitution when analyzing the relationship between the U.S. and Canadian dollars are overlooking potentially important information. Second, and more important for citizens of Canada, an independent Canadian monetary policy is difficult, if not impossible, to maintain, unless huge costs are imposed to make Canadian dollars less substitutable for U.S. dollars—costs that consumers will ultimately have to bear.

The policy implications are straightforward. Unless Canadian monetary policymakers are willing to ignore the consequences of international market pressures, they must consider the implications of the current U.S. monetary stance before initiating any set of policies that might be perceived as a *permanent* change in the relationship between the two currencies. The financial markets will be acting on information that changes the degree of currency substitutability—that is, information important to determining long-run policies and activities—rather than information that is simply concerned with the level of Canadian M1 next week.

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